

SIZE, SHAPE AND NUMBER OF *ASTRAGALUS CARYOCARPUS* FRUITS.—This species seemed to bloom in unusual profusion in the spring of 1945 and I noted much variation in color of flowers, from dark purple to pinkish and bluish hues. Fruits were produced in abundance and their apparent variation in shape suggested a study of them. Collections were made at two places in northern Richland County, North Dakota, July 7, and in Clay County, Minnesota, July 13. From July 18 to 21, collections were made in Morton and Slope Counties, North Dakota. In each case, 10 or more fruits were taken from 15 to 20 individual plants and carefully measured while fresh. The following table summarizes the results.

| Place | No. of plants | Aver. | Length | | Average ratio, length-width | | |
|-------------------|---------------|-------|--------|------|-----------------------------|------|------|
| | | | Max. | Min. | Aver. | Max. | Min. |
| Leonard, N. D., 1 | 18 | 2.0 | 2.2 | 1.8 | 1.01 | 1.09 | .91 |
| Leonard, N. D., 2 | 24 | 2.0 | 2.3 | 1.5 | 1.05 | 1.15 | .97 |
| Muskoda, Minn. | 15 | 2.0 | 2.2 | 1.9 | 1.01 | 1.09 | .96 |
| Mandan, N. D. | 22 | 2.0 | 2.2 | 1.9 | 1.00 | 1.06 | .96 |
| Amidon, N. D. | 15 | 1.8 | 2.0 | 1.7 | .89 | .91 | .85 |

The specimens from Slope County seem to run a trifle shorter than the others but the difference is scarcely significant. The general trend is clear and the variation less than I had expected. The fruits are just about 2 cm. long, varying only from slightly longer than wide to the reverse. Thickness was measured for only a few and it seemed rather uniform, about three-fourths of the width.

Gray's Manual describes the fruits as "ovoid-globular, more or less pointed." This is certainly not true of our material. The usual outline is quadrate, occasionally slightly obovoid. Sometimes there is a distinct mucronation from the style-base, but more often only a faint point.

A large plant on a roadside cut in Emmons County, had an expanse of fully a meter and bore 163 fruits. Smaller plants found later were even more prolific. We wondered whether size of fruit might be related to number, but counts indicated this was not true. The usual number per main stem was only 1 to 5, but occasionally reached 15 or 20 on an individual stem. Three plants in Slope County bore 93, 110 and 124 fruits respectively, the last a plant with an expanse of about 3 dm.—O. A. STEVENS, North Dakota Agricultural College, Fargo, North Dakota.